

Engineering Report:

Lassen National Forest

Eagle Lake Ranger District

Analysis of

National Forest System Road (NFSR)

32N73

for Motorized Mixed Use Designation

Forest: Lassen

District: Eagle Lake

Road Number: 32N73

Road Name: Antelope Mountain Lookout Road

Introduction: The 32N73 Road segments studied are located on the east side of Lassen National Forest (LNF) in the Antelope Mountain quadrangle, on Antelope Mountain.

NFSR 32N73 begins at the intersection of DR21 33N02/ML3 in Section 24 of the Antelope Mountain quadrangle and runs southeast to the south center quarter corner of S24 then proceeds due east for a short distance and turns due south

and runs one mile through the east half of S25, the road then winds its way up the east and south flanks of Antelope Mountain to it's terminus at the summit and the fire lookout facility. This road is approximately 2.5 miles in length.

The entire road is currently managed by LNF as open only to highway-legal

vehicles. The road segments analyzed were recommended in the LNF Travel

LNF Travel Analysis (June 2008) identified these road sections as connectors for recreational off-highway vehicle (OHV) loop opportunities on the adjacent maintenance level two road network, of which a portion is currently managed as open to non-highway-legal vehicle use.

Study Segment road data from the forest transportation atlas:

Segment 1: Beginning Mile Post: 0.50 Ending Mile Post: 1.00

LINE627A to LINE628

Traffic Service Level: ☐ A ☐ B ☒ C ☐ D

Objective Maintenance Level: ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5

Operational Maintenance Level: ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5

Segment 2: Beginning Mile Post: 1.50 Ending Mile Post: 2.50

32N74 to UNE636

Traffic Service Level: ☐ A ☐ B ☒ C ☐ D

Objective Maintenance Level: ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5

Operational Maintenance Level: ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5

Maintenance by: **Forest Service (FS)**

Non-Forest Service ROW or jurisdiction? ☐ Yes ☒ No

Any road use agreements, maintenance agreements, or other encumbrances?

☐ Yes ☒ No

Description of agreements or encumbrances:

No agreements are documented.

Subject to Highway Safety Act? ☒ Yes ☐ No

Non-highway-legal vehicles currently permitted? ☐ Yes ☒ No

Would motorized mixed use be consistent with State and local laws? ☐ Yes
☒ No

Description of inconsistency with State and local law:

According to California Vehicle Code section 38026, *Designating Highways: Combined Use*, off-highway operators on a Combined Use highway must be in possession of a valid driver's license.

Based on the Forest Service purpose and need of allowing all motor vehicles on this segment, designation for motorized mixed use would involve the preemption of state law if the road is to remain a highway.

Description of road management objectives (RMOs), existing use, and proposed use:

The road currently encourages use as an objective and operational ML3 local collector road and functions as ingress/egress access for the Antelope Mountain Fire Lookout, commodity extraction/forest management for Antelope Mountain.

Road 32N73 provides access from 33N02/ML3-4 for a short distance of approximately two and a half miles from the forest through-road, south and easterly around Antelope Mountain toe of slope and then up the southern flank of Antelope Mountain. Speeds are approximately 15-20 mph with a travel way consisting of primarily red volcanic cinder aggregate and some areas of exposed base-rock.

Most of the year it is currently managed as open only to highway legal traffic. The road is considered a highway by the forest service and is managed in accord with the Highway Safety Act.

The proposed use for this segment of 32N73/ML3 identified in this analysis is to authorize motorized mixed vehicle class use. The proposal is to utilize the ML3

currently manages this road as a highway, in accordance with the Highway Safety Act. The road is therefore subject to the provisions of the California Vehicle Code (CVC) for highways.

Factors Considered:

1. Operator considerations:

- Based on engineering judgment and experience/observation on other

2. Crash history:

At the time of this analysis, there are no records of vehicle crashes on this road.

3. Traffic volume and type:

Non-highway-legal vehicles:

☐ < 12 inch tread width ☐ < 50 inch tread width ☐ >50 inch tread width

Highway-legal vehicles:

☐ < 12 inch tread width ☐ < 50 inch tread width ☒ >50 inch tread width

☒ Passenger cars ☐ Commercial vehicles ☐ Recreation vehicles (RV's)

Vehicle distribution from a 1-hour observation July 29, 2008.

4 pickup trucks were observed on this road.

6. Intersections with other roads and trails:

The segment intersects with the following forest roads.

- 32N02/ML3-4
- UNE637A Unauthorized Route

UNE637A Unauthorized Route

Emergency run out is limited as the stage area shows a steep gradient.

visitor demands, and resource protection measures.

In addition, these mitigation measures would apply to the following alternatives.
Although the following alternatives are not comprehensive for the situation, they

Crash probability: ☐ High ☐ Med ☒ Low

[REDACTED]

Maps & Photos:

May 2008 DRAFT



Alternative 5 (Motorized Emphasis) Travel Management

NFS Selected Roads or Non-NFS Jurisdiction Roads Open to Highway
Legal Vehicles Only (includes NFS Maintenance Level 3-5 Roads,
State and County Roads, etc.)

Mixed Use Analysis Pending

Road Open to All Highway Legal and Non-Highway Legal Vehicles

County Jurisdiction Native Surfaced Road

ROAD NOT OPEN TO HIGHWAY LEGAL VEHICLES

Restricted Season of Use to Summer/Fall
(Winter Rec Trail)

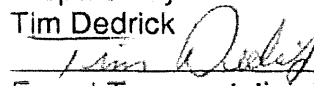


Motor Vehicles Prohibited

UTAH NATIONAL MONUMENT

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Date 9/29/08

Reviewed by

George Kulick

Date

Region 5 Qualified Engineer
Region 5 Office of Engineering

Engineering Report:

Lassen National Forest

Eagle Lake Ranger District

Analysis of

National Forest System Road (NFSR)

33N02

for Motorized Mixed Use Designation

Forest: Lassen

District: Eagle Lake

Road Number: 33N02

Road Name: Harvey Mountain Road

Introduction: The 33N02 Road segments studied are located on the east side of

Lassen National Forest (LNF) in the Harvey Mountain quadrangle on the

western boundary of Harvey Valley.

NFSR 33N02 begins at State Highway 44 in Section 29 of the Bogard Buttes

associated risks, for operating/transporting both highway-legal vehicles (motor vehicles, including the operators, that are licensed or certified for general operation on public roads within the State) and non-highway-legal vehicles (motor vehicles, including the operators, that are not licensed or certified for general operation on public roads within the State) on 33N02, from the intersection of 33N11 to 33N04YB for Segment 1, and from 33N81 to 34N01 for Segment 2. The LNE Travel Analysis (June 2008) identified these road sections

Study Component and data from the 2000-2001 season

Would motorized mixed use be consistent with State and local laws? ☐ Yes
☒ No

Description of inconsistency with State and local law:

According to California Vehicle Code section 38026, *Designating Highways: Combined Use*, off-highway operators on a Combined Use highway must be in possession of a valid driver's license.

Based on the Forest Service purpose and need of allowing all motor vehicles on

General Considerations:

All motor vehicle operators need to be cognizant of the applicable state laws, and how they pertain to each age group, vehicle type, and national forest system road classification (see next bullet).

Through authorities delegated by the Secretary, the Forest Service may restrict or control use to meet road management objectives (36 CFR 212.5). The LNF currently manages this road as a highway, in accordance with the Highway Safety Act. The road is therefore subject to the provisions of the California Vehicle Code (CVC) for highways.

State OHV Regulations: any motor vehicle must have a street-legal license plate to operate on highways. To operate on public lands, off of highways, motor vehicles must have either a street-legal license plate or a red sticker or a green sticker. For more information, see the CA State Parks Off-Highway Motor Vehicle Recreation site, available @ <http://ohv.parks.ca.gov/>

California has:

- requirements for ATV safety
- conditions for operating ATVs
- OHV equipment requirements
- OHV operation requirements

Summary of Findings:

Implementing the universal mitigation measures, especially improved signing and

Factors Considered:

1. Operator considerations:

- Based on engineering judgment and experience/observation on other national forest management units, the LNF has an above average standard of road. The Lassen is not "typical" in it's road system's adherence to maintenance levels. This road is an objective ML3 as it provides fire lookout tower access which necessitates a high level ingress/egress emergency access road.
- Topologically, the unit is semi-mountainous, fairly dry, and sandwiched between the Pacific Southwest Research Station's research forest, Black's Mountain Experimental Forest and the State of California Game Refuge to the west, and the forest rangeland of the Harvey Valley area to the east. The operational level of this road is classified as a 3+. The road has a management objective of maintenance level 3 to provide for all-weather (during fire season May to October) fire staffing access and fire vehicle emergency access. The objective of the road is to provide access for emergency fire detection and suppression response, wildlife management

2. Crash history:

At the time of this analysis, there are no records of vehicle crashes on this road.

3. Traffic volume and type:

Non-highway-legal vehicles:

☐ < 12 inch tread width ☐ < 50 inch tread width ☐ >50 inch tread width

Highway-legal vehicles:

☐ < 12 inch tread width ☐ < 50 inch tread width ☐ >50 inch tread width

☐ Passenger cars ☐ Commercial vehicles ☐ Recreation vehicles (RV's)

Vehicle distribution from a 1-hour observation July 30, 2008.

No vehicles observed.

4. Speed - Anticipated average speed (85th percentile):

The speed greatly varies, depending on the roadway conditions. The 85th percentile would be estimated at: ~~25~~ mph.

5. Road surface type:

The road has a combination of crushed rock aggregate and red volcanic cinder aggregate surfacing. Portions of the traveled way are raised and the shoulders are soft and non-compacted. The road is approximately 16' wide. The surface

6. Intersections with other roads and trails:

Segment 4 intersects with the following forest roads:

Progress was not limited as the subject was not

visitor demands, and resource protection measures.

In addition, these mitigation measures would apply to the following alternatives. Although the following alternatives are not comprehensive for the situation, they represent the most likely and/or practical options based on engineering judgment.

Alternative 1: Designate the road segments as "open to highway-legal vehicles only". Manage the road in accordance with maintenance level 3 standards.

- Maintain all roadway signing to MUTCD standards.
- Consider designing new trails, a new trailhead, and/or a new camping area to provide better opportunities for non-highway-legal motor vehicle traffic to access the area and the adjacent maintenance level 2 roads.
- Approximate Implementation Cost: \$ 0
- Expected risk:

Crash probability: ☐ High ☐ Med ☒ Low

Crash severity: ☐ High ☐ Med ☒ Low

Alternative 2: Designate the road segment as "open to all motor vehicles", including highway-legal and non-highway-legal vehicles.

- Recognize that this situation would involve different allowed uses and would complicate communication and enforcement.
- Improve education and enforcement communication to explain the complexities of various allowed uses on the road.
- Install appropriate signs of a type approved by the Department of Transportation on and along the highway to identify and communicate the potential hazards related to motorized mixed use.
- Notify the Commissioner of the California Highway Patrol and review their opinion.
- Approximate Implementation Cost: \$ 3500

Final Comments:

Signing on national forest system roads should conform to the standards presented in the FS sign and poster guidelines (available @ http://fsweb.wo.fs.fed.us/eng/roads_trails/signs_05/index.htm).

In addition, roads managed under the highway safety act, including the study segments here, must comply with the standards in the MUTCD (available @ <http://mutcd.fhwa.dot.gov/>).

According to the Sign and Poster Guidelines for the Forest Service (2005):

The following priorities are to be used to minimize the potential conflicts of mixed use:

- Provide separate facilities.
- Separate use periods. Roads may be designated for separate use periods such as season, weekday/weekend, or day/night. Notify the public of the locations, effective dates, times, and duration that the

Maps & Photos:



May 2008 CRAFT



0 0.5 1 Miles

121°15'0"W

Alternative 5 **(Motorized Emphasis)** **Travel Management** **Lassen National Forest**

Bogard Buttes

- NFS Surfaced Roads or Non-NFS Jurisdiction Roads Open to Highway Legal Vehicles Only (includes NFS Maintenance Level 3-5 Roads, State and County Roads, etc.)
- Mixed Use Analysis Pending
- Road Open to All Highway Legal and Non-Highway Legal Vehicles
- County Jurisdiction Native Surfaced Road
- 4WD Trail Open to High Clearance Vehicles
- Non-Motorized Trail

Unauthorized Routes to be Added to the National Forest Transportation System

121°10'0"W

Restrict Season of Use to Summer/Fall (Winter Rac Trail)

- Motor Vehicles Prohibited
- Lassen National Forest
- Private Land

Areas Open to Motorized Vehicle Use



May 2008 DRAFT



0 0.5 1 Miles

Harvey Mtn

Alternative 5 (Motorized Emphasis) Travel Management Lassen National Forest

- NFS Surfaced Roads or Non-NFS Jurisdiction Roads Open to Highway Legal Vehicles Only (includes NFS Maintenance Level 3-5 Roads, State and County Roads, etc.)
- Motor Vehicle Use Analysis Pending
- Road Open to All Highway Legal and Non-Highway Legal Vehicles
- County Jurisdiction Native Surfaced Road
- 4WD Trail Open to High Clearance Vehicles
- Non-Motorized Trail
- Unauthorized Routes to be Added to the National Forest Transportation System

Restricted Season of Use to Summer/Fall (Winter Rec Trail)

- Motor Vehicles Prohibited
- Lassen National Forest
- Private Land

Areas Open to Motorized Vehicle Use

May 2008 DRAFT



Alternative 5 **(Motorized Emphasis)** **Travel Management** **Lassen National Forest**

Champs Flat

0 0.5 1 Miles
121°00'W



NFS Surfaced Roads or Non-NFS Jurisdiction Roads Open to Highway Legal Vehicles Only (Includes NFS Maintenance Level 3-5 Roads, State and County Roads, etc.)

Vexed Use Analysis Pending

Road Open to All Highway Legal and Non-Highway Legal Vehicles

County Jurisdiction Native Surfaced Road

4WD Trail Open to High Clearance Vehicles

Non-Motorized Trail

Unauthorized Routes to be Added to the National Forest Transportation System

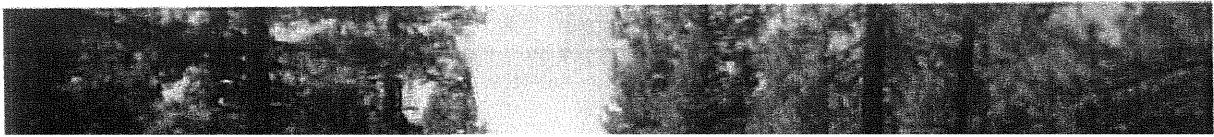
Restricted Season of Use to Summer/Fall (Winter Rec. Trail)

Motor Vehicles Prohibited

Lassen National Forest

Private Land

Areas Open to Motorized Vehicle Use







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